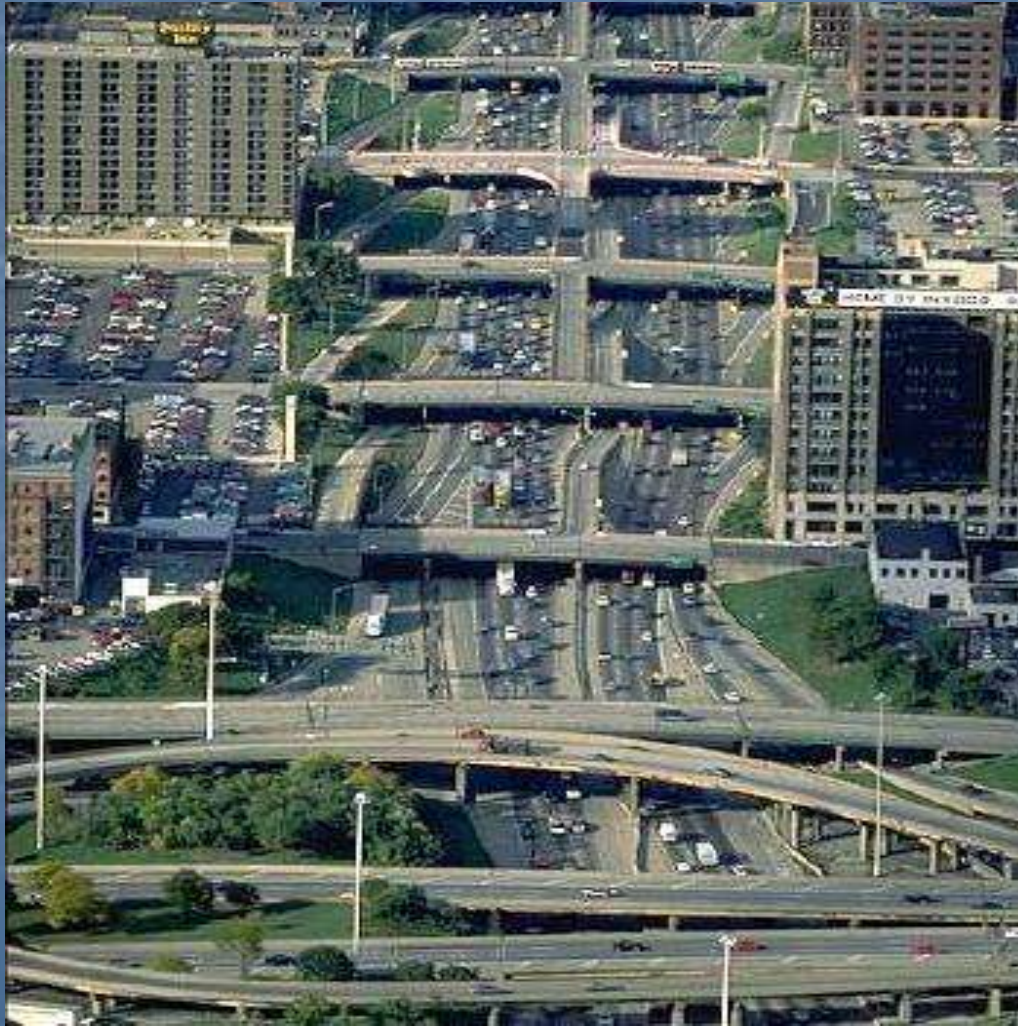


# Intelligence Led Policing

## Illinois State Police - District Chicago

Captain Peter J. Negro, District Commander



# District Chicago

- Population of District Chicago (Cook County)-5.3 million people
- Dan Ryan Expressway-(ADT 320,000)
  - Reconstructed in 06/07 for \$975 million
  - Increased from 14 to 16 lanes
- Approximately 100,000 calls for service in 2007
- 17,500 crashes in 2007
  - Down from 20,000 in 2005
- 38 Fatalities in 2007, 33 Fatal Crashes
  - Down From 48/45 in 2005, 41/40 in 2006



# District Chicago Traffic Safety Goals

- To change the expectations/culture of drivers
  - Driver behavior vs. engineering/highway design
- To learn who, what, why, when and where for more efficient and effective staffing
  - Aggressive enforcement in appropriate areas for unsafe drivers
- Communicate/share data with IDOT for most effective use of engineering improvements
  - Road Safety Assessment Training

# Traffic Safety Efforts in 2006/2007/2008

- Implemented with emphasis on four E's district wide
  - Enforcement
  - Engineering
  - Education
  - Emergency Medical

# Overview of Today's Presentation

- Data Collection and Analysis
  - District Chicago Crash Analysis
  - District Review using Road Safety Assessment Concepts
  - 5% Report
  - CAD Zone Activity Analysis
  - Human Intelligence
- Roadway Problem Identification and Solutions
- Enforcement Strategies
- Engineering Strategies
- Educational Strategies



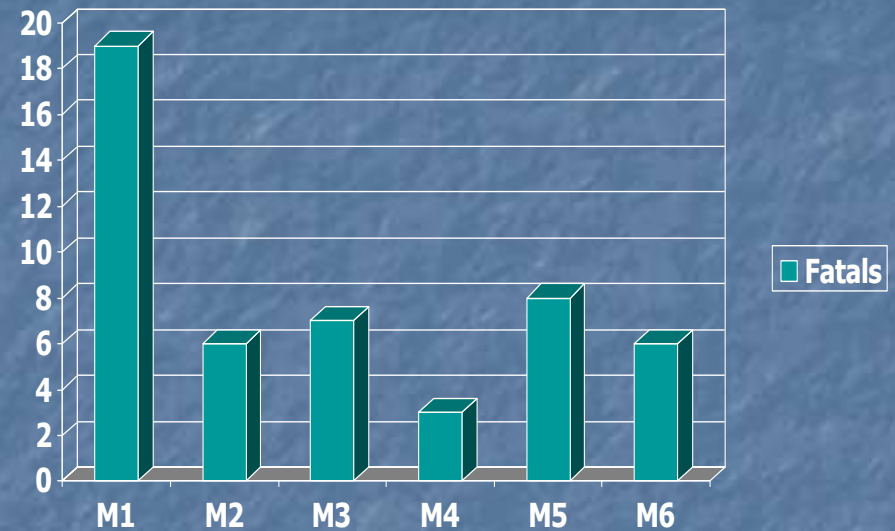
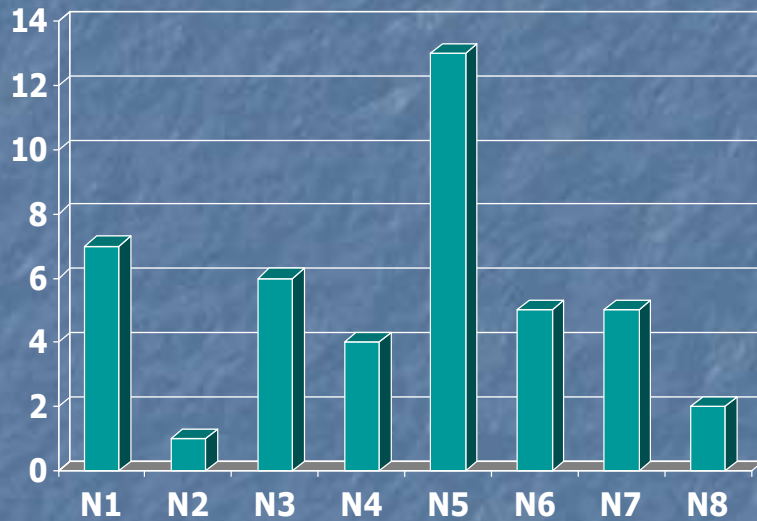
# Data Collection and Analysis

- District Activity Analysis
- Recent District Crash Data (2004-2007) Analysis
  - District Wide Field Review Using Road Safety Assessment Concepts
- Historical District Crash Data (IDOT-99-04) Analysis
- IDOT/Federal Highway Safety Administration Highway Safety Improvement Program Five Percent Report Review
- Computer Aided Dispatch Zones Analysis
- Human Intelligence Analysis
  - Input from Patrol Personnel

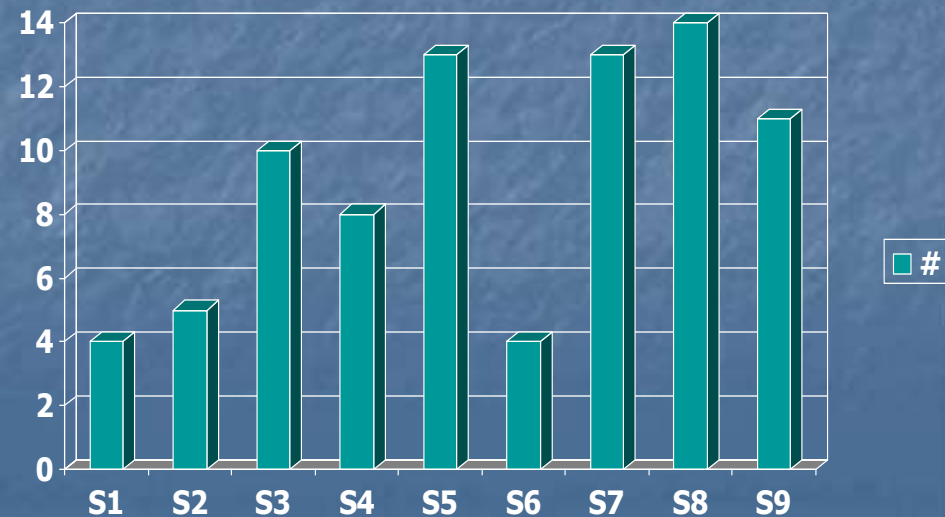
# Data Collection and Analysis

- Crash Data Analysis of District Chicago  
2004-2007

# Fatalities by Sector/Patrol



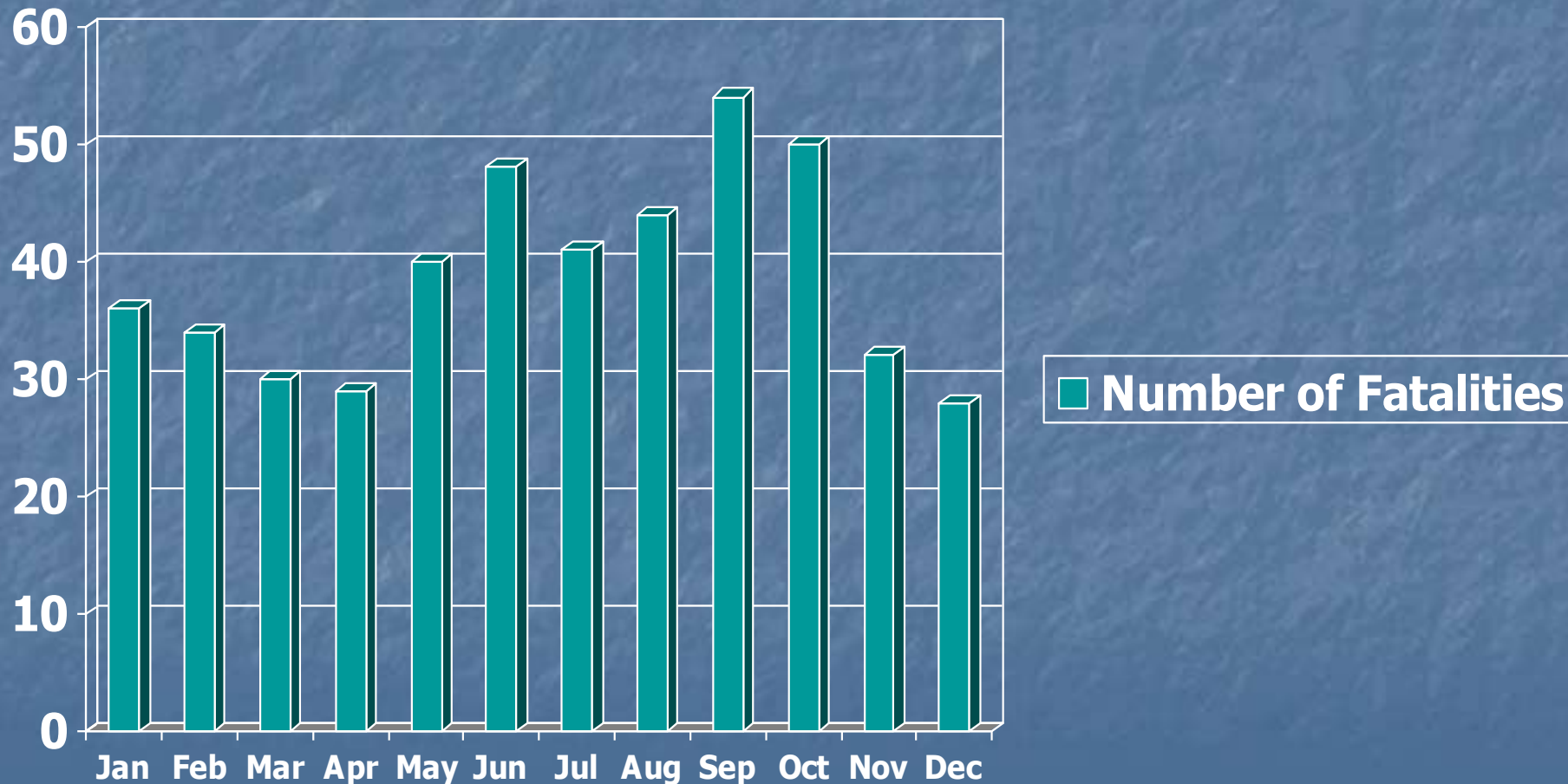
Fatalities





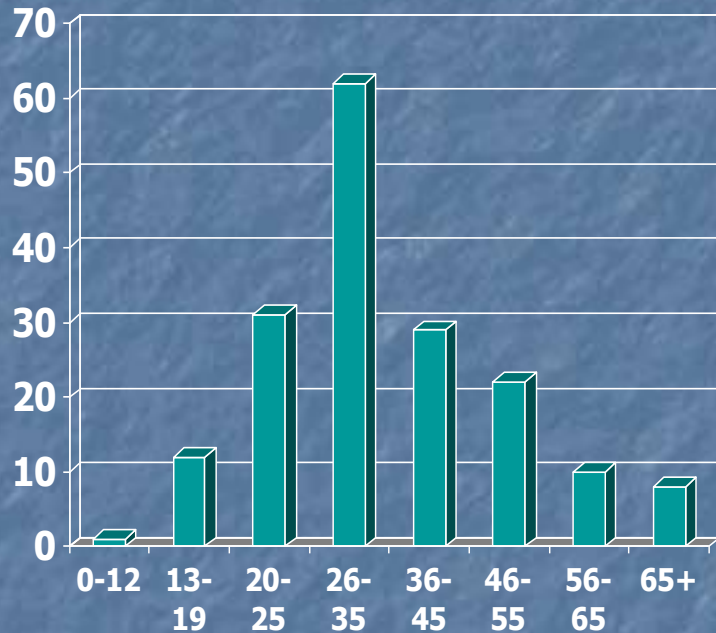
# Fatalities by Month

## 10 Year Average 1997-2006

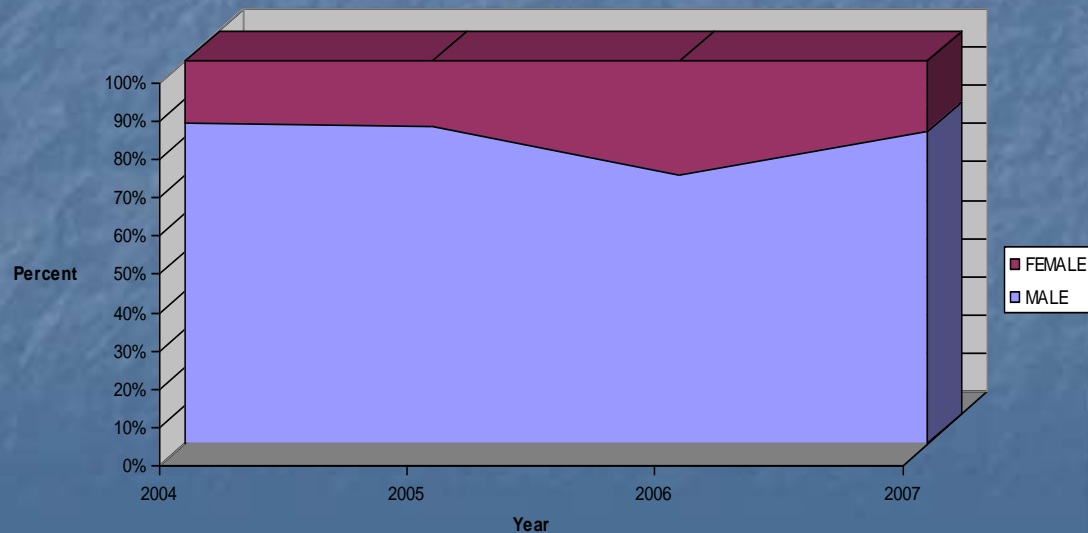


# Fatalities by Age & Gender

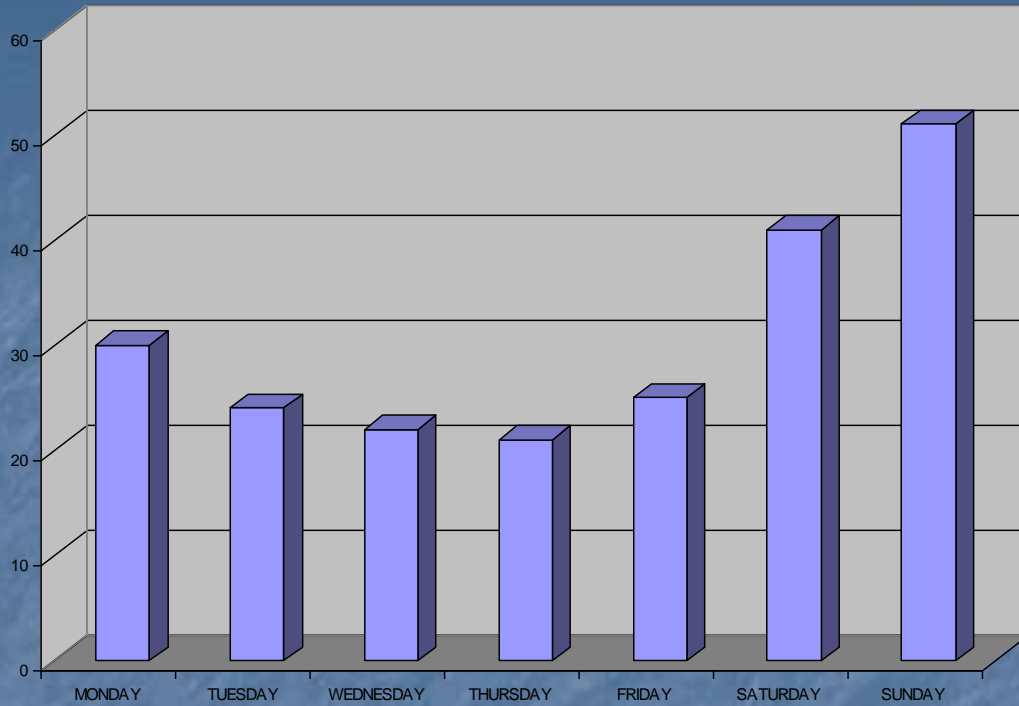
District Chicago 2004-2007



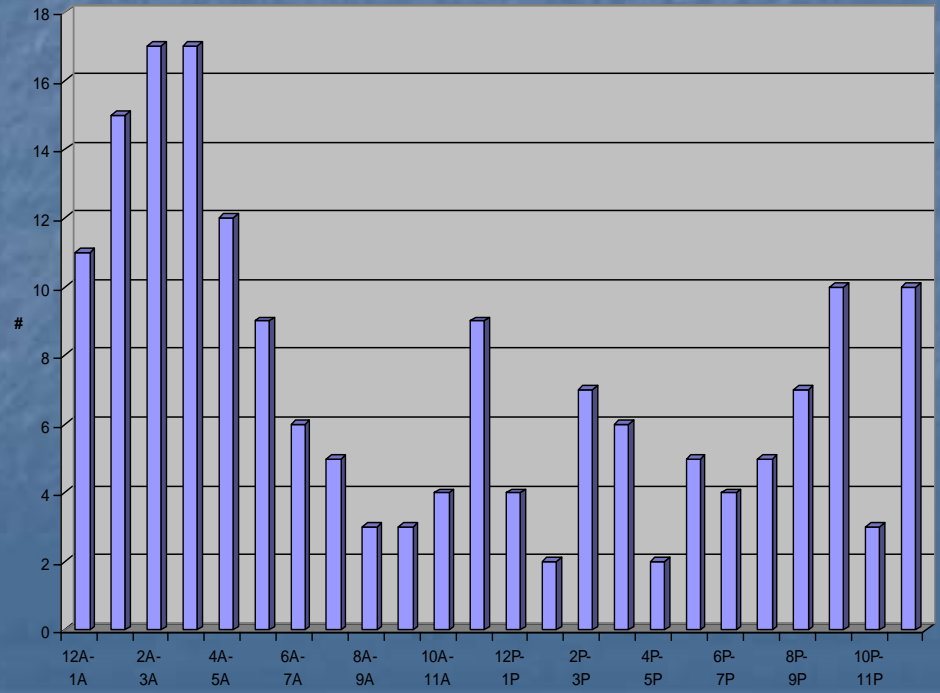
■ Number of Fatales by Age



# Day of the Week

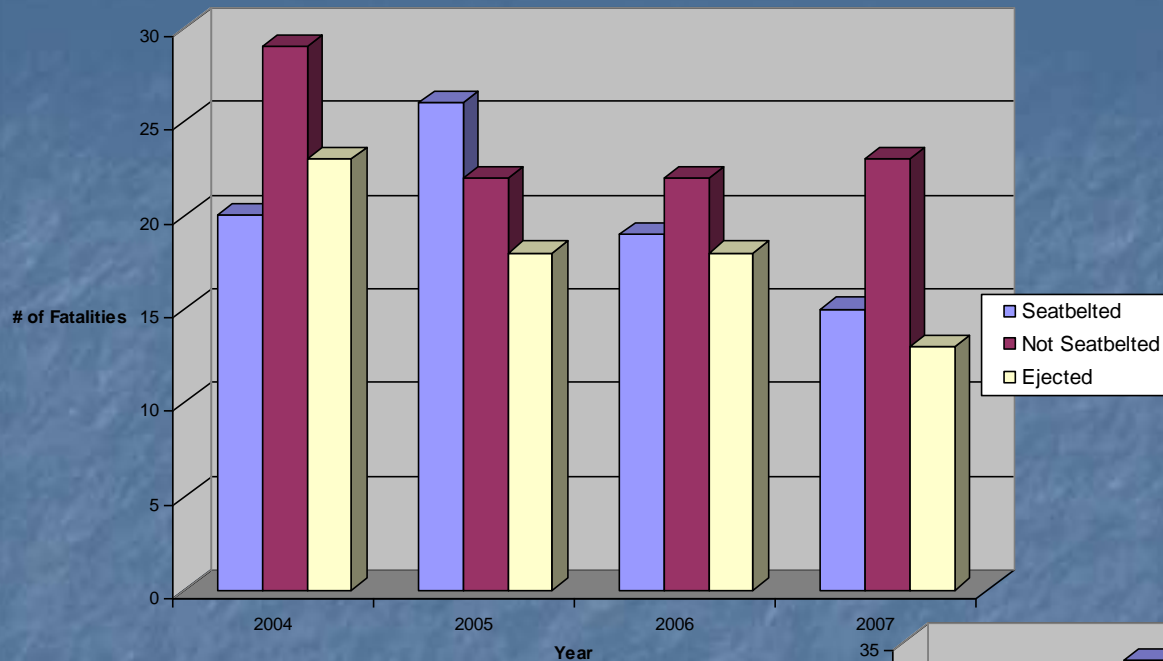


# Time of Day

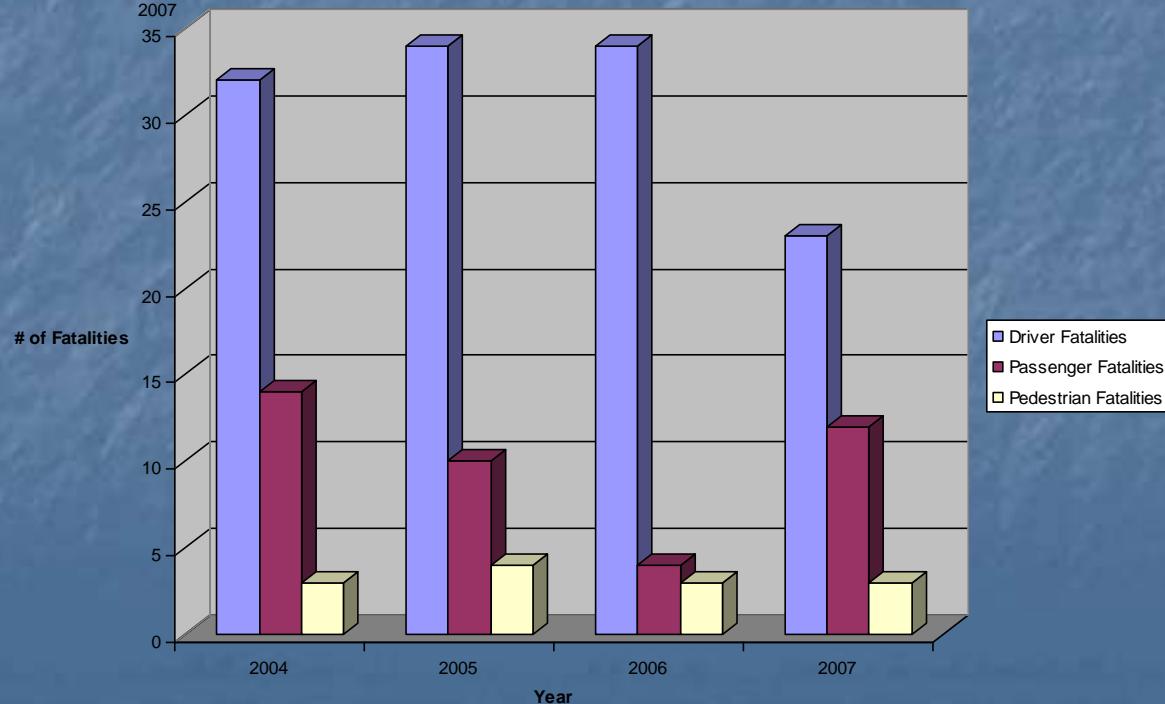




# Occupant Restraint

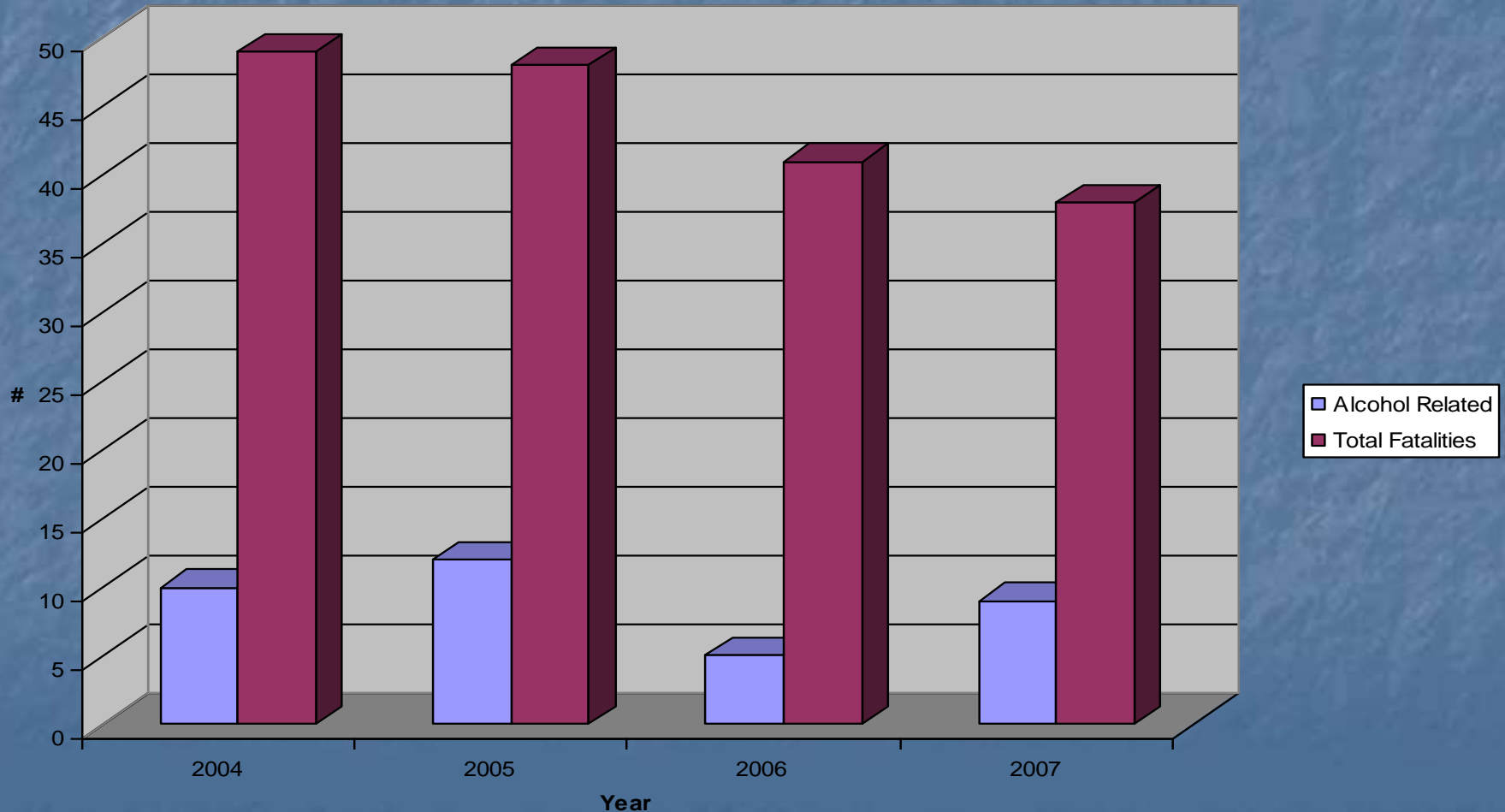


## Driver vs. Passenger

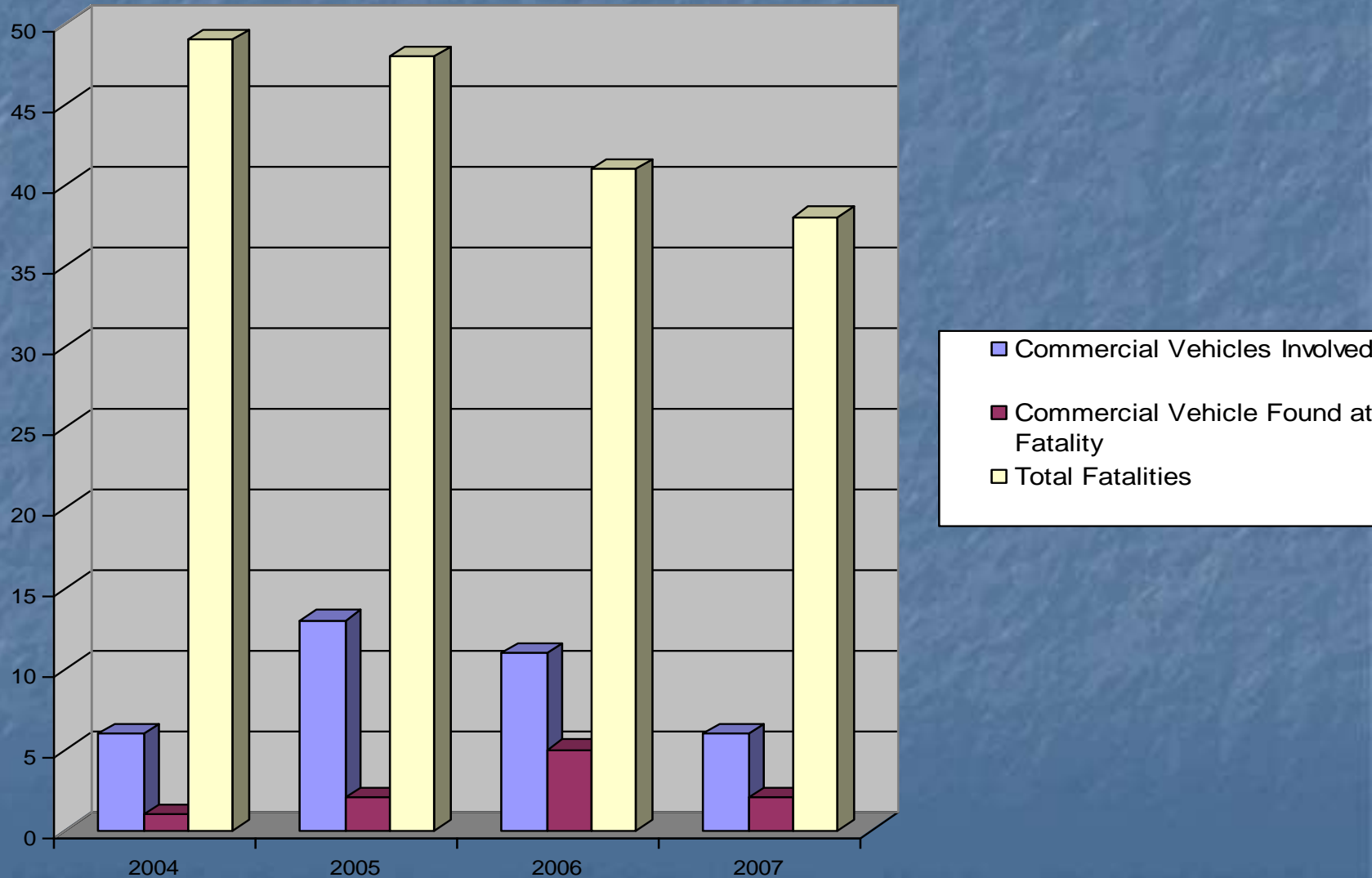


# Alcohol Related vs. Total Fatalities

Alcohol Related Fatalities



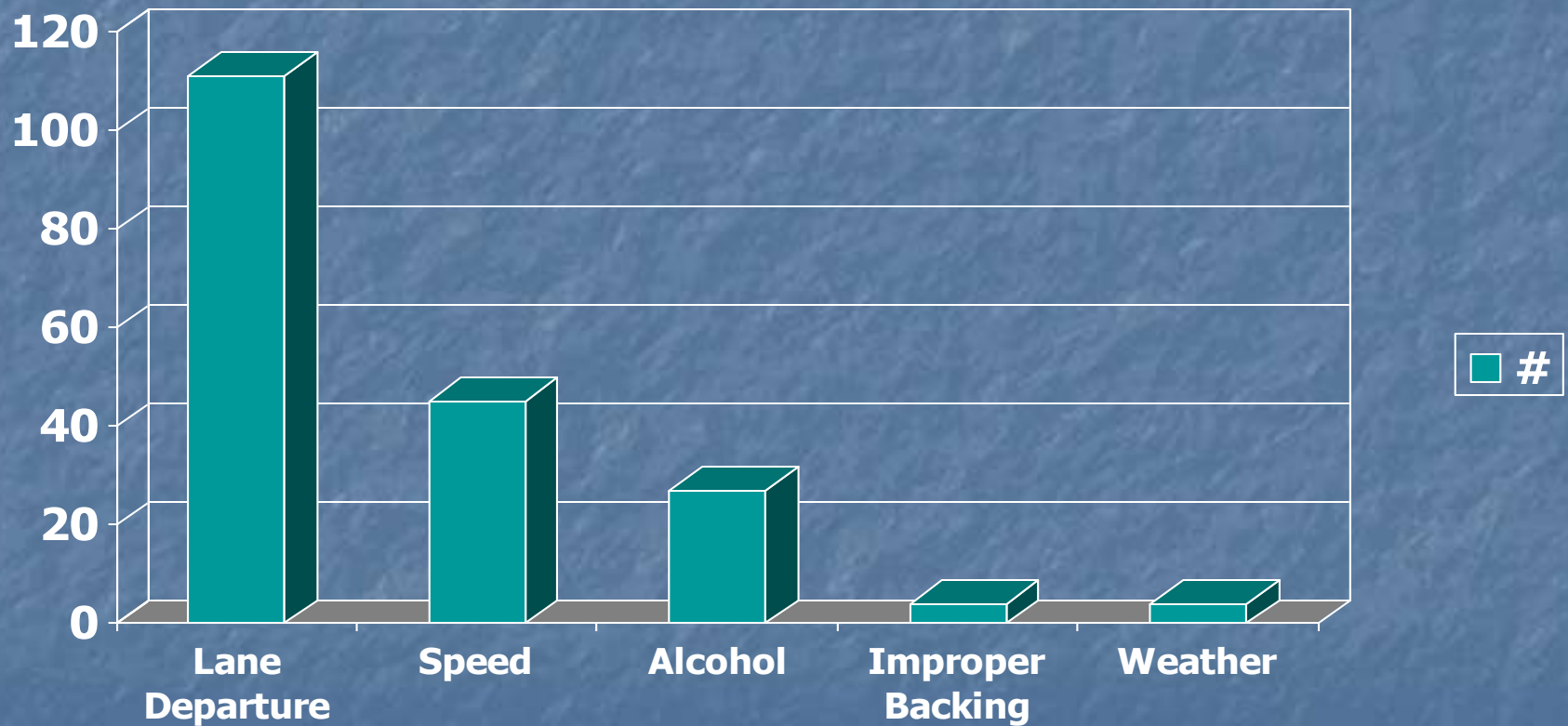
# Commercial Vehicle Fatalities



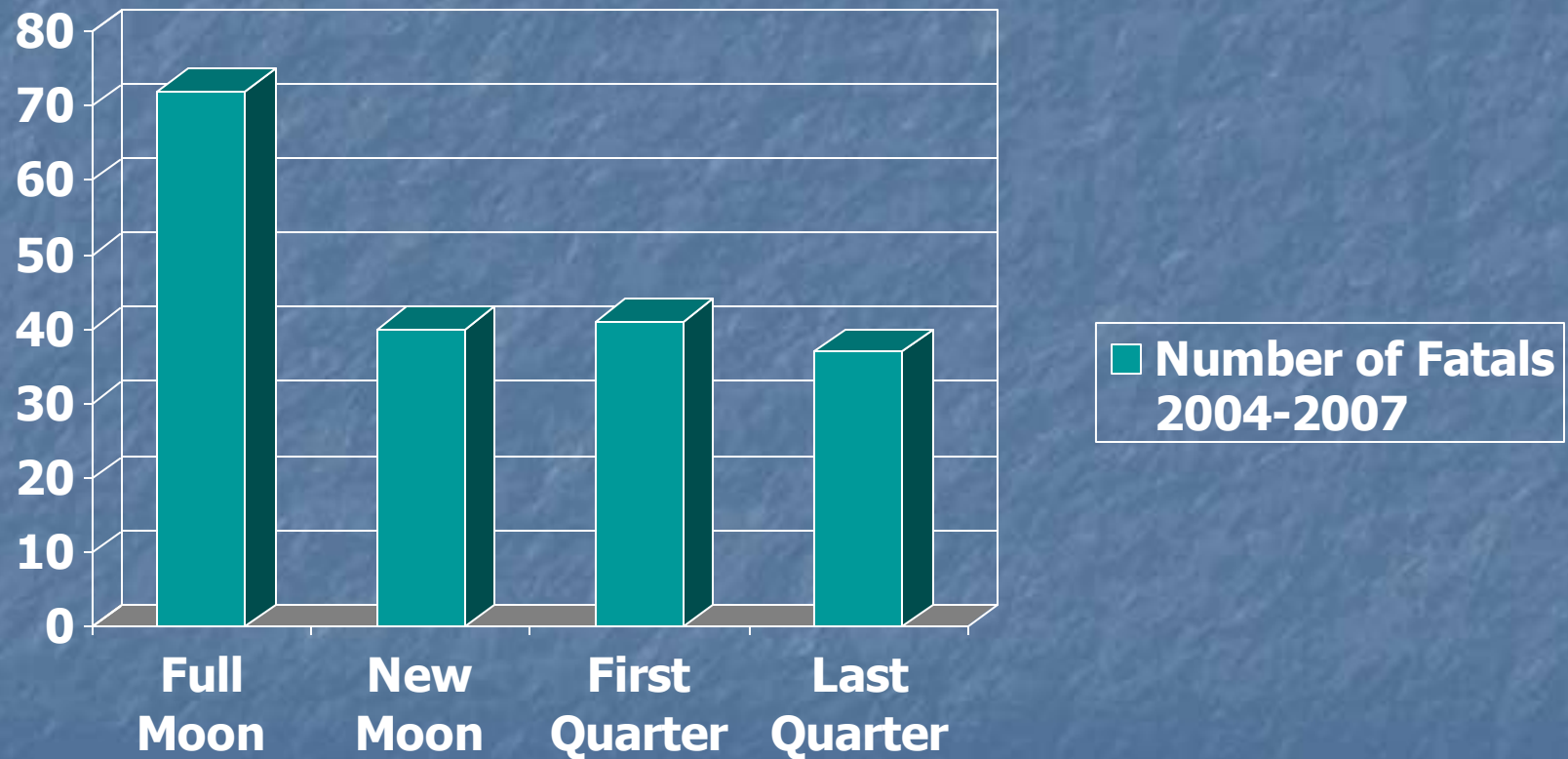


# Causes of Fatal Crashes

District Chicago 2004-2007



# Lunar Cycle Fatality Comparison



# Typical D-Chicago Fatality

- Male/26-35 YOA/Driver of a Car
- Not Restrained/Not DUI
- Lane Departure and Speeding
- Saturday or Sunday 9pm-5am During a Full Moon
- I-94 (Edens) From Wilson Avenue to Old Orchard
- I-94 (Dan Ryan) From 47<sup>th</sup> St to 87<sup>th</sup> St
- I-290 Between Congress and Kostner
- I-57 from 119<sup>th</sup> Street to Steger Road
- All of IL 394



# Data Collection and Analysis

- District CAD Zone Analysis
  - Separates Interstates by Zone. For example, Interstate 290 (Chicago and Suburbs) contains 24 zones.
  - It classifies types of calls and the time spent on those types of calls.
  - It also classifies total number of calls for service, the average response time, time on scene and total incident hours.

# CAD Zone Analysis

- The purpose of the analysis is to identify high-frequency locations
  - Fatalities
  - Personal Injury Crashes
  - Property Damage Crashes
  - DUI Arrests
  - Damage to Property
    - Criminal
    - Non-Criminal
  - UUW Arrests
  - Solicitors/Panhandlers

## The seal of the Illinois State Police is circular. It features a central shield with a white outline of the state of Illinois on a blue background. Above the shield is a golden eagle with its wings spread. The words "ILLINOIS STATE POLICE" are written in a circle around the top, and "INTEGRITY • SERVICE • UNION" is written around the bottom. The seal has a decorative, scalloped border.

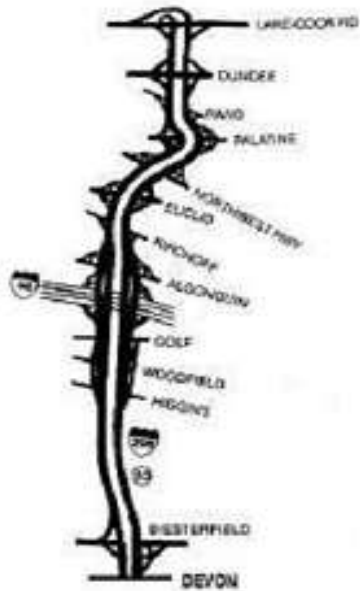
### 2007 Personal Injury Crashes



# North Sector Property Damage Crashes



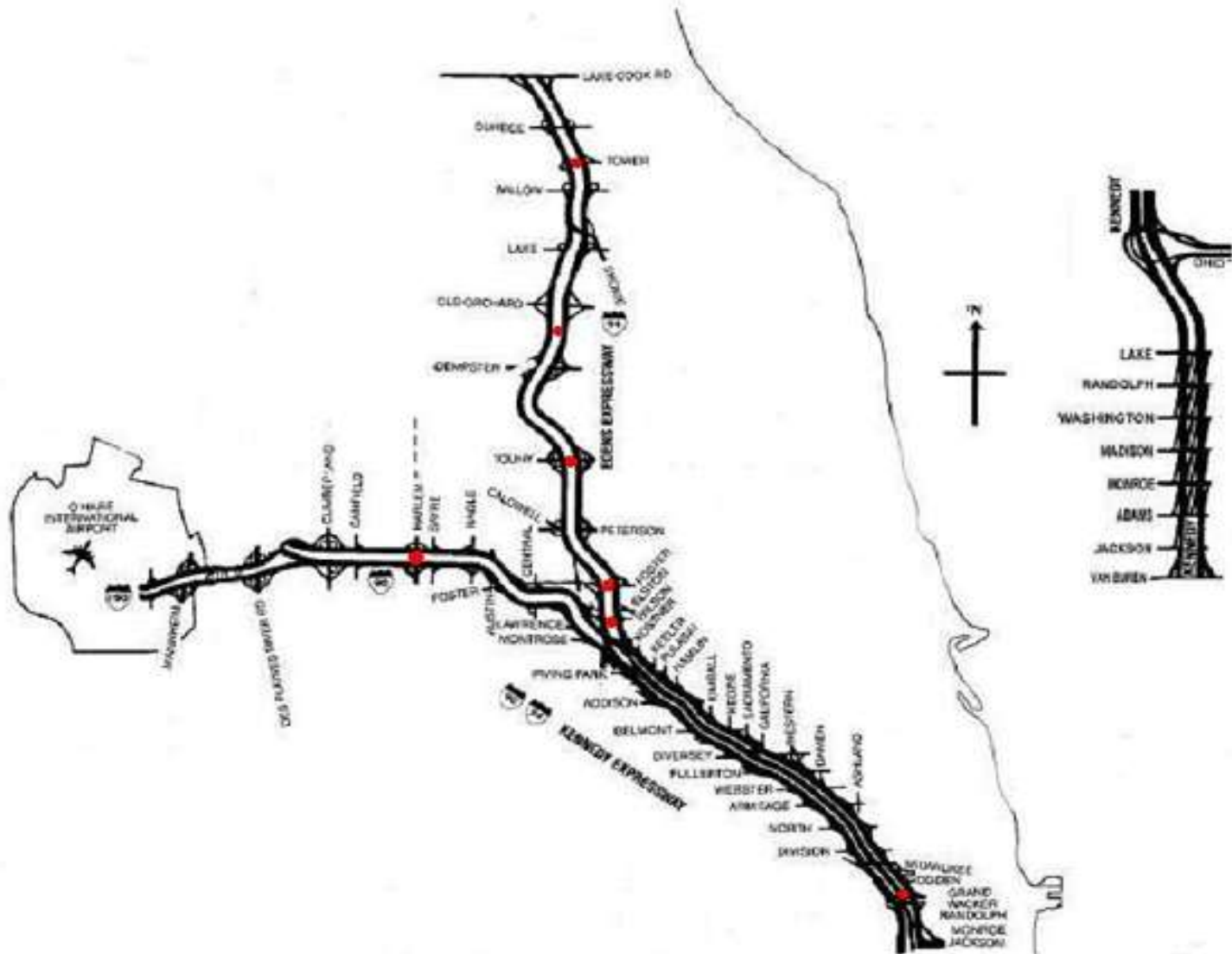
# North Sector Fatalities



Fatals 2007



District Chicago  
North Sector



# North Sector DUI Arrests



District Chicago  
North Sector

# North Sector Solicitors



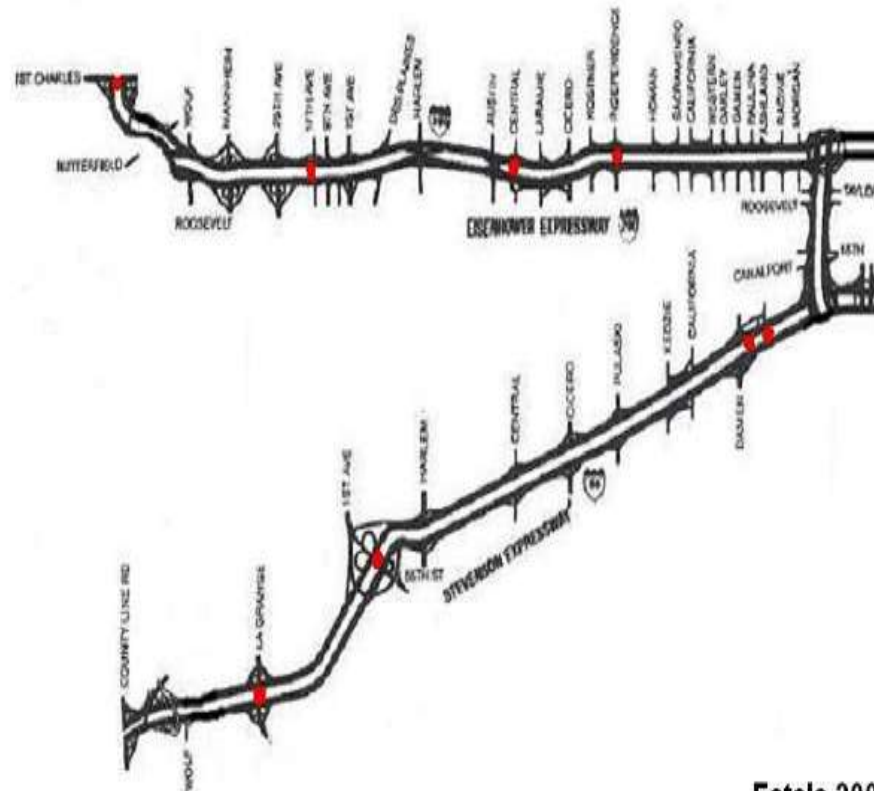
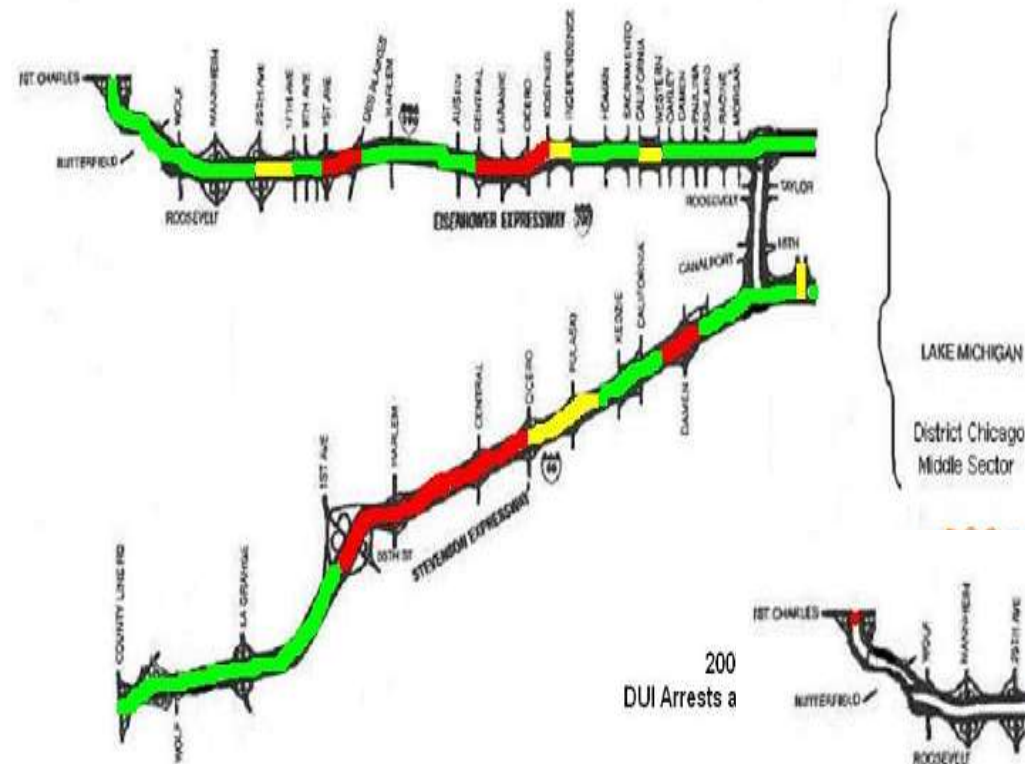
District Chicago  
North Sector



# North Sector UUW Arrests



# DUI Arrests vs. Fatal Crashes Middle Sector



Fatals 2007



# IDOT Historical Crash Data

- Worked with IDOT Statewide Safety Engineer (Priscilla Tobias) to analyze crash data and to work on solutions
  - Continuous communication and strategy sessions
  - Emphasis on engineering improvements
  - Chiefs of Police meeting to offer engineering grants



# Five Percent Report

- *As part of the Highway Safety Improvement Program, states are required to submit an annual report to the Federal Highway Administration (FHWA) describing not less than 5 percent of the highway locations exhibiting the state's most pressing safety needs.*



# Five Percent Report

- *The intent of the Five Percent Report is to gain an understanding of the nature and extent of safety problems, to provide guidance to the states for [locations] where safety investments are needed, and to provide a basis for tracking the progress toward improving safety in each state. The FHWA is providing guidance for the process and content of the report. The FHWA Resource Center recommends that the report be as comprehensive as possible.*



Project Manager Kim Kolody / CH2MHill is a consultant to IDOT.

# Five Percent Report-District Chicago

- The Five Percent Report shows five general designated five percent areas on expressways within District Chicago
- IL394 - - - -
- I 094 103rd St Bishop Ford Expwy Stony Connector -
- I 057 W 107th St W 111th St I-57 Sb To 111th St W Leg Dan Ryan
- I 090 Edens Expressway N Milwaukee Ave Lawrence Av Lawrence To I-90 Eb
- I 055 S Ashland Ave S Western Ave - -
- I 090 W Harrison St W Roosevelt Rd Taylor -
- I 290 N Central Ave S Ridgeland Ave Eisenhower Xwy I290 Eb To Austin Av
- I 290EB 1st Harlem Des Plaines
- I 090 Des Plaines River Rd I-294 Nb To I-90 Wb I-90 Eb To I-294 Nb Northwest Tollway



# District Wide Field Review Using Road Safety Assessment Principles

- Human Intelligence



# Human Data Collection and Analysis

- Input from Patrol Personnel to Improve High Crash/Fatal Problem Areas
  - An e-mail/IWIN message was sent to all district personnel seeking suggestions to identify/solve problem areas in District Chicago

# District Chicago Human Intelligence Problem Response #1

- *IL 394 south bound from 183<sup>rd</sup> to Glenwood/Lansing Road. There is a curve to the left just south of 183<sup>rd</sup> that has proven to be a fatal spot. As the road curves, vehicles go off the roadway into the right ditch and strike a tree, resulting in death. I have reconstructed two fatalities there, but have known that many, possibly 10 fatalities have occurred there, mostly southbound with some north bound crossover.*

# Illinois Route 394

- Approximately seven miles in Cook County from I-80 to Steger Road
- ADT on the north end is 60,500 on the north end and 26,000 on the south end
- Controlled access restriction on north end, electric traffic control signals on south end
- Relatively straight road
- 20 Fatalities from 2002-2007



# Illinois 394 SB

**Fatal Area**



© 2007 Europa Technologies  
© 2007 Tele Atlas  
Image NASA

© 2007 Google TH

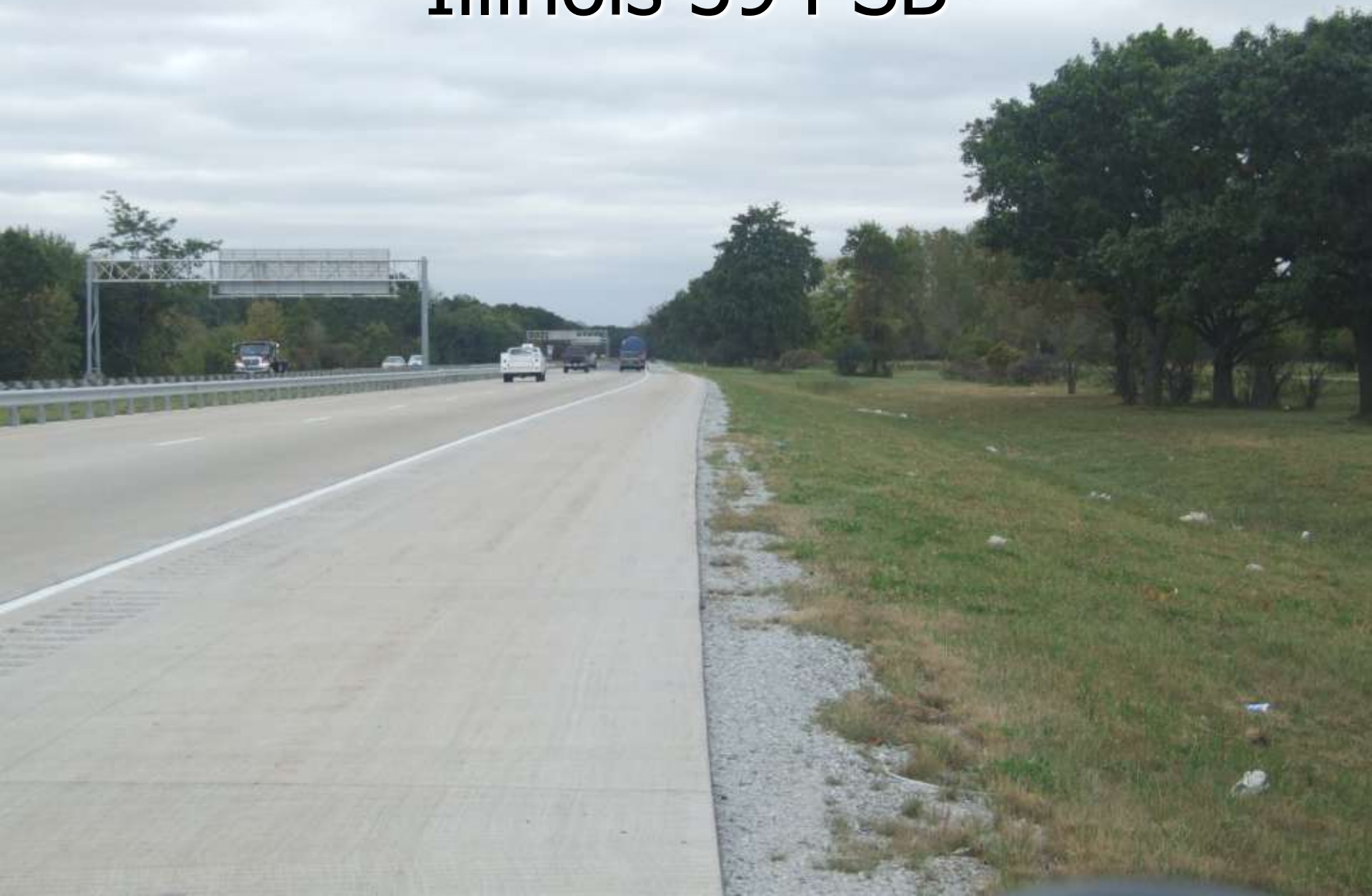
Pointer 41°32'42.26" N 87°34'58.58" W elev 606 ft

Streaming 100%

Eye alt 12522 ft



# Illinois 394 SB



# Illinois 394 SB



# Illinois 394 SB













# Problem #1 Recommendation

- *My first suggestion is a guardrail, not cable rail, be installed off the right lane of the south bound shoulder from 183<sup>rd</sup> to Glenwood/Lansing Road. Second would be cable rail placed in the median along the same points to assist with crossover crashes.*



# Immediate Solution

- Add Chevrons and reflective delineators





Glenwood -  
Over Road  
1 mile



# Next Step Solution-IL 394

- Pavement resurfacing from Joe Orr Road to Steger Road and shoulder striping and bridge repair (\$4.9 million) B/C 13
- New traffic signals from Sauk Trail to Exchange (\$434,000)
- High tension median cable, guardrail repairs, shoulder rumble strips from IL Route 1 to I-80-13 miles (\$2.5 million) B/C 13





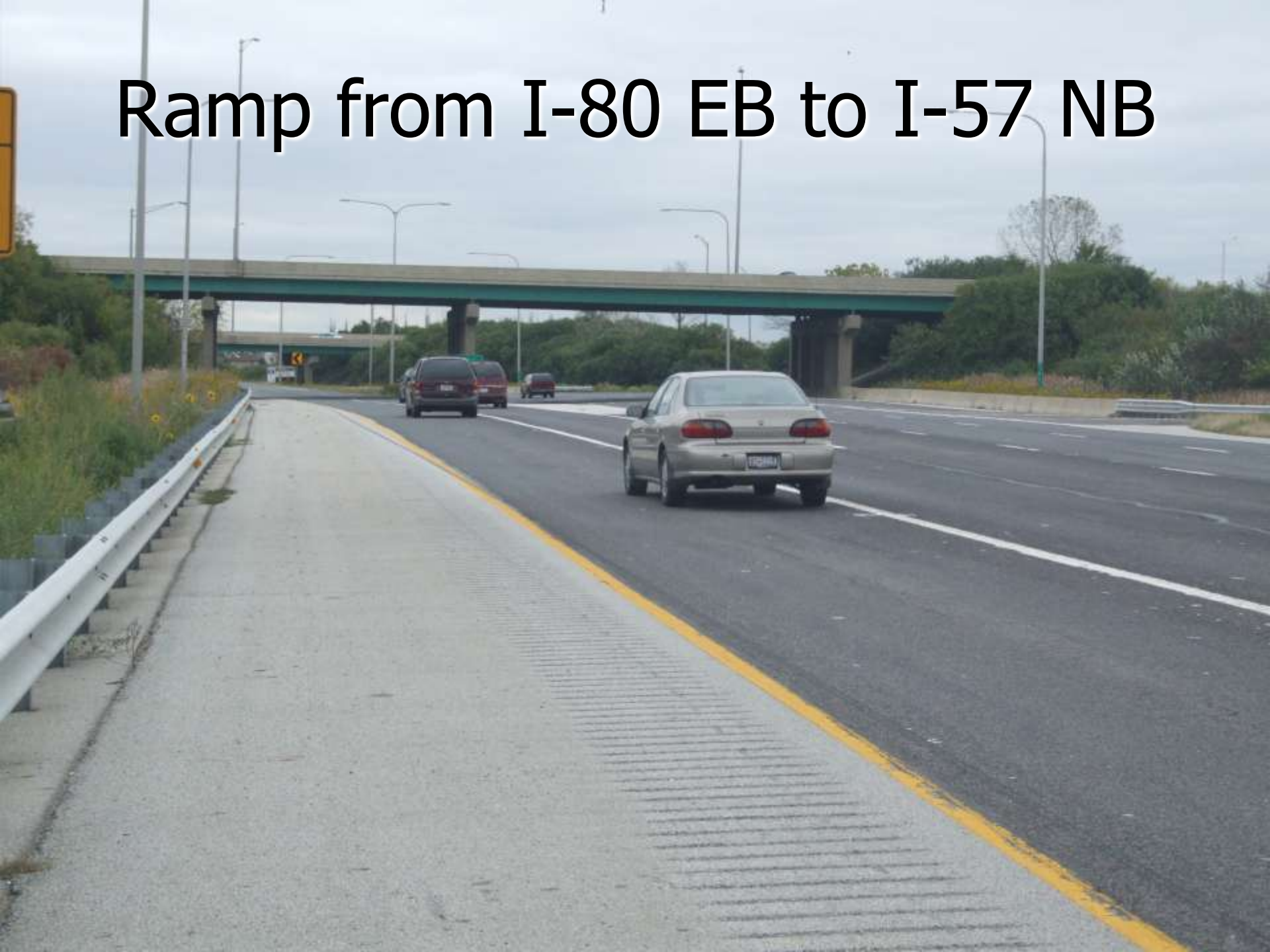


# District Chicago Human Intelligence Problem Response #2

- *We have had numerous serious injury crashes, including fatalities, on the ramp from I-80 east bound to I-57 north bound.*



# Ramp from I-80 EB to I-57 NB



# Ramp from I-80 EB to I-57 NB





# Ramp from I-80 EB to I-57 NB





# Problem #2 Recommendation

- Add signage and a guardrail from I-80 east bound to I-57 north. Additionally, rumble strips/stripes to slow cars down would help (Problem Oriented Policing Project).

# Immediate Solution

- Added/Replaced Chevrons and Reflective Delineators
- Curve Warning Signs
- Large Left Arrow



# Problem #2 Anticipated Solution

- District One HSIP FY09-12 Anticipated Candidate Projects
  - Location: I-80 eastbound ramp to I-57 northbound
  - Proposed Improvements: Add paved right shoulder & embankment through curve
  - Cost: \$400,000



# District Wide Field Review Using Road Safety Assessment Concepts

## Fatal Crash Study 2004-2007

- Read narratives of all crashes
- Looked for common causation
- Looked for crashes that could be eliminated/mitigated with engineering upgrades/changes

# Crash Report Narrative Study (Based on RSA Principles)

- I-80 east bound from Pulaski to Tollway  
Ramp-Traffic Congestion Problems
- Illinois 394
  - Ramp to Route 30
- I-80 east bound ramp to I-57 north bound
- I-94 Expressway from Golf Road to Lake  
Cook Road

# Problem #3

- I-80 east bound from Pulaski to the Tollway ramp east of I-57, traffic congestion causes stopped traffic. We have had several fatalities due to rear end collisions (driver distraction/inattention).



# Solution

- Install pavement sensors and sign with flashing lights to alert drivers of traffic congestion ahead
- Install overhead changeable message sign to alert drivers of traffic conditions
- Tollway-Add I-Pass express lanes to mitigate congestion

155  
NORTH  
State Turnpike  
consin  
2 MILES

80 294 EAST  
Indiana  
AHEAD 2 MILES

WHEN FLASHING  
WATCH FOR  
STOPPED TRAFFIC

IL-50 VIA 294 9 MIN  
55 VIA 294 21 MIN  
394 VIA 294 6 MIN

Rates need  
**lowering?**

8.5000000000000000  
ONE PLACE





# Traffic Safety Efforts

## Multi-Disciplinary Approach

- **Enforcement**
- Multi-Disciplinary Approach
  - District Chicago Tactical Plan
  - District Chicago crash/crime information is provided to sector lieutenants/master sergeants (including MEB) for Crash/Fatal/Crime reduction planning with emphasis on Directed Patrols
  - Sector lieutenants and Platoon Master Sergeants continuously plan and schedule directed patrols and special details in District Chicago
  - Hireback Coordinator selects and schedules hireback patrols based on maps and data analyses

# 2008 Traffic Safety Strategies

## Multi-Disciplinary Approach

### ■ Enforcement

- District Chicago Master Sergeant Meeting-December 13, 2007
  - All District Chicago Command
  - Discuss Analyses and provide direction/documentation for 2008 (starting January 8, 2008) platoon meetings
  - Work with District Chicago Hireback Coordinator to plan 2008 hireback details

# District Chicago Enforcement Results 2007

- Personal Injury Crashes-1,790
- Fatal Crashes/Fatalities-33/38
- DUI Citations-1,413
- Seat Belt Citations-15,669
- Speed Citations-13,150
- Total Citations-75,893
- Speed Written Warnings-11,591
- Total Written Warnings-46,500
- Firearm Recoveries-74
- Criminal Arrests-2,285
- Currency Seized-\$1,335,780



# 2008 Traffic Safety Strategies

## Multi-Disciplinary Approach

### ■ Engineering

- Coordinate with IDOT D1 on safety program
- Obtain copy of previous year and upcoming year engineering safety program to determine if known problem areas are being considered
- Participate in weekly IDOT District 1 construction meetings

# 2008 Traffic Safety Strategies

## Multi-Disciplinary Approach

- District 1 IDOT Meeting-November 8, 2007
  - Attended by all ISP Districts in IDOT District 1 (2, Chicago, 5 and 15), IDOT Statewide Safety Engineer , District 1 Programs/Safety Engineer and IDOT Safety Section Chief
  - Focus on communication and engineering improvements to include working with local Police Departments (District 2 ISP)

# Traffic Safety Efforts

## Multi-Disciplinary Approach

### ■ Education

- School Programs and Prom Demo
- Multi-agency press conferences with IDOT and various information provided to media
- Photo radar, Motorcycle, Dan Ryan Project (Discovery Channel), Stay Alive on the I's media stories
- Work closely with the local community
- Constant updates/enforcement information on Electronic Message Boards



# District Chicago Safety Education Officer

- Works with local agencies to assist with education and enforcement
- Car Seat Details
  - Berwyn/Cicero (NHTSA Stats)
- Seat Belt Enforcement Zones
  - South Suburban Association of Chiefs of Police
- School Zone Details

# Child Restraint Crash Data

Cook County Crash Count - Child Not Restrained Properly - 2000-2007

County	Class Of Trafficway Groups	Statistical Year	
Cook	Urban	2000 - 2007	
	Safety Equip Used		
	Child restraint not used	Child restraint used improperly	Grand Total
City	Crash Count	Crash Count	Crash Count
Alsip	9	2	11
Arlington Heights	20	19	38
Barrington	3		3
Barrington Hills	2	7	9
Bartlett	1	1	2
Bedford Park	2		2
Bellwood	6	6	12
Berkeley		3	3
Benwyn	29	25	54
Blue Island	8	4	12
Bridgeview	14	12	26
Broadview	2	1	3
Brookfield	6	2	8
Buffalo Grove	2	1	3
Burbank	9	5	14
Burnham	1	3	4
Burr Ridge	1		1
Calumet City	34	10	44
Calumet Park	3	4	7
Chicago	624	260	897
Chicago Heights	20	10	30
Chicago Ridge	2	2	4
Cicero	40	25	61
Country Club Hills	6	3	9
Countryside	3	4	7
Crestwood	6	4	10
Deerfield	2	2	4
Des Plaines	8	13	21
Dixmoor	3	1	4
Dolton	14	1	15
East Hazel Crest	1		1
Elgin	10		10
Elk Grove Village	12	15	26
Elmwood Park	10	5	15
Evanston	20	6	26
Evergreen Park	8	7	15
Flossmoor	1	1	2
Ford Heights	2	2	4
Forest Park	10	2	11
Forest View	1		1
Franklin Park	9	7	16
Glencoe	1		1
Glenview	15	9	24

County	Class Of Trafficway Groups	Statistical Year	
Cook	Urban	2000 - 2007	
	Safety Equip Used		
	Child restraint not used	Child restraint used improperly	Grand Total
City	Crash Count	Crash Count	Crash Count
Glenwood	2	2	4
Hanover Park	6	6	12
Harvey	12	5	17
Harwood Heights	1		1
Hazel Crest	4	1	5
Hickory Hills	6	2	7
Hillside	2	2	4
Hodgkins	4	2	6
Hoffman Estates	13	18	31
Hometown	1	1	2
Homewood	6	5	10
Indian Head Park	1	1	2
Inverness	1		1
Justice	1	2	3
La Grange	3	1	4
La Grange Park		4	4
Lansing	8	5	13
Lemont	1	1	2
Lincolnwood	7	2	9
Lynwood	1	1	2
Lyons	3	1	4
Markham	9	4	13
Matteson	8	5	13
Maywood	6	5	10
Mo Cook	4	1	5
Melrose Park	11	3	14
Merrionette Park	1		1
Midlothian	8	2	10
Morton Grove	7	2	9
Mount Prospect	17	9	26
Niles	10	5	15
Norridge	4	2	6
North Riverside	5	1	6
Northbrook	4	5	9
Northfield	2	4	6
Northlake	7	6	13
Oak Forest	9	2	11
Oak Lawn	30	18	48
Oak Park	32	10	41
Olympia Fields	1	1	2
Orland Hills		2	2
Orland Park	18	15	32
Palatine	22	7	29
Palos Heights	1	9	10
Palos Hills	5	1	6

# Traffic Safety Efforts

## Multi-Disciplinary Approach

- Emergency Medical
  - Critical Incident Response Plan-Dan Ryan Expressway Construction Project
    - Plan developed by ISP, IDOT, CPD and CFD
    - Rehearsed prior to start of project
    - Complicated due to the elimination of shoulders on the Dan Ryan Expressway
  - Cooperative effort with local hospital helicopters



On behalf of Captain Peter J. Negro  
and the members of District  
Chicago,  
Thank you

# Contact Information

Captain Peter J. Negro

ISP District Chicago Commander

Office-847.294.4442

Email-negrope@isp.state.il.us